

Appln No. 10/735,050

Amdt date March 20, 2007

Reply to Office action of January 25, 2007

REMARKS/ARGUMENTS

Claims 1-28 remain in the present application, of which claims 1, 15, 17 and 24 are independent. Claims 1, 15, and 17 are amended herein. Applicant submits that the amendments to these claims are of a nature that does not require a new search. Support for the amendment is found throughout the specification. No new matter has been added. Accordingly, Applicant requests that these amendments be entered prior to further consideration of the claims. None of the claims has been canceled. Applicant respectfully requests reconsideration and allowance of claims 1-28.

I. Rejection of Claim 15 under 35 U.S.C. §103(a)

Claim 15 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Rahman et al. (USP 6,716,028) in view of Cook et al. (USP 6,623,500). In rejecting claim 15, the Examiner contends "Rahman shows a hand piece 82, Figs. 11A-11D, for a transducer 14, a body 82b rotatably receiving a transducer, rotator head 80a engaging the transducer for rotation, means 80b for rotatably coupling the body 82b to the rotator head 80a." The Examiner concedes that Rahman does not show a rotor head that envelopes at least a portion of the body. However, the Examiner cites Cook to show "an ultrasonic tool including a rotator head 200 that envelops at least a portion of a body 150," and contends "[i]t would be obvious to one of ordinary skill in the art to modify Rahman to include locating the elements in reverse orientation so that the rotator head is on the outside as shown by Cook."

Applicant respectfully traverses the rejection.

Rahman et al. teaches the rotation of the insert relative to the body of the handpiece by using a bearing adjacent the transducer on the insert to slidably engage the handpiece. See Abstract. Rahman et al also teaches a section 80a that has a smaller diameter than the body in order for it to reside inside the body. See FIGs. 11A-B, col. 8, lines 56-60. In rejecting claim 15, the Examiner appears to equate cylindrical body section 80a of Rahman et al. with "a rotator head" in claim 15, but admits that section 80a does not envelope a portion of the handpiece body.

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Section 80a has a smaller diameter than the body. Therefore, section 80a is not the same as the rotator head. A part “enveloping a portion of the body” has a larger diameter than the body it is enveloping. To reside inside a body, a part must have a smaller diameter than the body it resides in. Therefore, “enveloping” and “residing inside” the body are completely opposite teachings.

Cook et al. discloses a surgical handpiece having a switch end cap detachably and rotatably connected to the handpiece body. “An instrument, such as a blade, e.g., a scalpel blade, is inserted and secured within the handpiece body so that a portion of the blade extends beyond the handpiece body for contacting tissue and the like. The switch end cap includes a switch mechanism having one or more switch button members for selectively signaling the level of power delivered to the handpiece from a power source, e.g., an external ultrasonic generator.” See col. 1, line 63 to col. 2, line 4. (Emphasis added). It further discloses that “the handpiece body and the switch mechanism disposed within the switch end cap are electrically connected to one another in such a manner that permits the switch end cap may be freely rotated about the handpiece body while the electrical connection is maintained. This permits a user, e.g. a surgeon, to rotate the switch end cap during operation of the handpiece in order to position the switch end cap in an optimum position relative to the blade. Because the blade has a generally non-symmetrical nature, the surgeon may prefer to alter the relative position of the switch end cap with respect to the blade in order to conveniently contact tissue. The present invention provides such a feature and permits the surgeon to tailor the specific location of the switch end cap for and during a specific surgical operation”. See col. 2, lines 32-44. (Emphasis added). “The switch end cap 200 is formed of an outer shell 201 having a distal end 202 and an opposing proximal end 204 with the proximal end 204 of the switch end cap 200 receiving and mating with the distal end 152 of the body 150 (FIG. 4).” See col. 6, lines 57-61. Thus, Cook et al is not related to rotating the instrument relative to the body of the handpiece. On the other hand, Cook et al teach an instrument that is secured within the body, and a switch end cap which rotation changes the electrical power and alters its position relative to the body and the instrument, such as the blade.

As amended, claim 15 recites, in relevant part:

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“a body adapted for rotatably receiving such transducer;

a rotator head adapted for engaging such transducer for rotation thereof, wherein the rotator head envelopes at least a portion of the body; and

means for rotatably coupling the body to the rotator head, said means being fixedly coupled to one of the body and the rotator head and rotatably coupled to the other of the body and the rotator head;

wherein rotation of the rotator head rotates the transducer.”

Three criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference, or combination of references, must teach or suggest all the claim limitations. MPEP § 2142.

Applicant respectfully submits that there is no motivation in either the teaching of Rahman et al or Cook et al to combine their teachings. First, the teaching of Cook et al. is completely unrelated to that of Rahman et al., as noted above. Second, Cook et al teaches a switch end cap which is on the outside of the body. This end cap does not cause the rotation of the instrument, but only the rotation of the cap relative to the instrument or body. This is opposite to the teaching of Rahman et. al., which teaches that the section 80a is inside the body, and the body rotates relative to the insert.

Applicant also respectfully submits that even if there is a motivation to combine, the combined teaching does not motivate one to arrive at the present invention without using Applicant’s invention as a road map, as follows:

1. The combined teaching will tend to suggest that when the part 80a is moved from inside the body to outside the body, the insert or instrument is secured inside the body, as taught by Cook et al.

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2. There is no teaching or motivation that rotation of the rotator head rotates the transducer or insert anywhere in Rahman et al, in Cook et al, or combined.

Therefore, claim 15 is patentable under 35 U.S.C. § 103(a) over Rahman et al. (USP 6,716,028) in view of Cook et al. (USP 6,623,500). Reconsideration is respectfully requested.

II. Rejection of Claims 1-4, 13, 14, 16-19, and 21-27 under 35 U.S.C. §103(a)

Claims 1-4, 13, 14, 16-19 and 21-27 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Rahman et al. in view of Novak (USP 6,012,922) and Cook et al.

While rejecting claims 1-4, 13, 14, 16-19 and 21-27 under 35 U.S.C. §103(a), the Examiner concedes that "coupling means of Rahman is not in the form of a ring," but contends that "[i]t would be obvious to one of ordinary skill in the art to modify Rahman to include using a ring coupling means as shown by Novak in order to make use of known alternatives in the art. ." Hence, Novak appears to be cited here for the proposition that it discloses coupling means in the form of a ring.

Applicant respectfully traverses the rejection of claims 1-4, 13, 14, 16-19 and 21-27 for at least the following reasons:

Independent claim 1 now recites, in relevant parts, as follows:

"a body adapted for rotatably receiving such transducer;

 a rotator head adapted for engaging such transducer for rotation thereof, wherein the rotator head envelopes at least a portion of the body; and

 a retainer ring fixedly coupled to one of the body and the rotator head and rotatably coupled to the other of the body and the rotator head, such that the rotator head is rotatably coupled to the body;

 wherein rotation of the rotator head rotates the transducer."

Independent claim 17 now recites, in relevant parts, as follows:

 "an insert comprising a tip and a transducer for converting electrical energy into ultrasonic vibrations; and

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a handpiece comprising:

a body rotatably receiving the insert;

a rotator head engaging the insert for rotation thereof, wherein the rotator head envelopes at least a portion of the body; and

a retainer ring fixedly coupled to one of the body and the rotator head and rotatably coupled to the other of the body and the rotator head, such that the rotator head is rotatably coupled to the body; and

a coil assembly for exciting the transducer;

wherein rotation of the rotator head rotates the insert."

Independent claim 24 recites, in relevant parts, as follows:

"a body adapted for rotatably receiving an ultrasonic insert;

a rotator head adapted for engaging such ultrasonic insert for rotation thereof, wherein the rotator head envelopes at least a portion of the body; and

a retainer ring fixedly coupled to one of the body and the rotator head and rotatably coupled to the other of the body and the rotator head, such that the rotator head is rotatably coupled to the body;

wherein the rotation of the insert is effected by applying force to the rotator head."

As discussed above, a *prima facie* case obviousness cannot be established for claim 15 over Rahman et al. and Cook et al. For similar reasons, a *prima facie* case of obviousness for claims 1, 17 and 24 cannot be establish over Rahman et al. and Cook et al.

Novak discloses a handpiece for use in driving a rotatable dental tool. See col. 2, lines 16-17. The deficiencies of Rahman et. al. and Cook et al. noted above is not supplied by Novak, as Novak is only being cited to teach a ring coupling means. In addition, there is no teaching or motivation in any of Rahman et al., Cook et al. or Novak to combine their teachings to arrive at the claimed invention. Therefore, Applicant requests that the rejection of claims 1, 17 and 24 be

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withdrawn and that these claims be allowed. Likewise, claim 15 is also patentable over Rahman et al. in view of Novak and Cook et al.

Claims 2-4, 13, 14, 16, 18-19, 21-23 and 25-27 are dependent from claims 1, 15, 17 and 24 and also rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Rahman et al. in view of Novak and Cook et al. While Applicant does not acquiesce with the particular rejections to these dependent claims, it is believed that these rejections are moot in view of the remarks made in connection with independent claims 1, 15, 17 and 24. These dependent claims depend from claims 1, 15, 17 and 24, respectively. They incorporate all of the limitations of the base claim and any intervening claims, and recite additional features which further patentably distinguish these claims over the cited references. Therefore, Applicant requests that the rejection of claims 2-4, 13, 14, 16, 18-19, 21-23 and 25-27 be withdrawn and that these claims be allowed.

Reconsideration is respectfully requested.

III. Rejection of Claims 5 and 6 under 35 U.S.C. §103(a)

Claims 5 and 6 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Rahman et al. in view of Novak and Cook et al. as applied to claim 1, and further in view of Coss et al. (USP 5,655,906). Coss et al. is being cited here for the proposition that it "shows a plurality of grooves and slots."

Applicant respectfully traverses the rejection.

As discussed above, claim 1 is patentable over Rahman et al. in view of Novak and Cook et al. The deficiency of Rahman et. al., Novak and Cook et al. is not supplied by Coss et al., which is cited for the proposition that it "shows a plurality of grooves and slots." Therefore, claim 1 is patentably distinguishable over Rahman et al. in view of Novak and Cook et al., and further in view of Coss et al., even if such combination is proper, which Applicant by no means concedes.

While Applicant does not acquiesce with the particular rejections to these dependent

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claims, it is believed that these rejections are moot in view of the remarks made in connection with independent claim 1. Claims 5 and 6 depend from claim 1, and they each incorporate all the limitations of claim 1 in addition to other limitations, which together further patentably distinguish these claims over the cited references. Therefore, Applicant requests that the rejection of claims 5 and 6 be withdrawn and that these claims be allowed.

Reconsideration is respectfully requested.

IV. Rejection of Claims 7-10, 20 and 28 under 35 U.S.C. §103(a)

Claims 7-10, 20 and 28 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Rahman et al. in view of Novak and Cook et al. as applied to claim 1, and further in view of Carmona et al. (USP 3,654,502). Carmona et al. is being cited for the proposition that it "teaches a coil 36, bobbin 16, O-ring 30 and fluid 66 within the bobbin."

Applicant respectfully traverses the rejection.

As discussed above, claims 1, 17 and 24 are patentable over Rahman et al. in view of Novak and Cook et al.

Carmona et al. is being cited for the proposition that it teaches "a coil 36, bobbin 16, O-ring 30 and fluid 66 within the bobbin." Therefore, Carmona et al. does not supply the deficiencies of Rahman et al. in view of Novak and Cook et al. Therefore, each of claims 1, 17 and 24 is patentably distinguishable over Rahman et al. in view of Novak and Cook et al., and further in view of Carmona et al., even if such combination is proper, which Applicant by no means concedes.

While applicant does not acquiesce with the particular rejections to these dependent claims, it is believed that these rejections are moot in view of the remarks made in connection with independent claim 1, 17 and 24. Claims 7-10, 20 and 28 depend, directly or indirectly, from claims 1, 17 and 24, respectively, and incorporate all the terms and limitations of claim 1, 17 or 24, and other limitations, which together further patentably distinguish them over the cited references. Therefore, Applicant requests that the rejection of claims 7-10, 20 and 28 be

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withdrawn and that these claims be allowed.

Reconsideration is respectfully requested.

V. Rejection of Claims 11 and 12 under 35 U.S.C. §103(a)

Claims 11 and 12 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Rahman et al. in view of Novak, Cook et al. and Carmona et al. as applied to claim 8, and further in view of Paschke et al. (USP 5,395,240). Paschke et al. is being cited here for the proposition that it discloses "using a plug pin. . ."

Applicant respectfully traverses the rejection.

As noted above, claim 1 is patentable over Rahman et al. in view of Novak, Cook et al. and Carmona et al.

Paschke et al. is being cited to disclose the use of a plug pin, and as such, does not supply the deficiencies of Rahman et al. in view of Novak, Cook et al. and Carmona et al., even if such combination is proper, which Applicant by no means concedes. Therefore, claim 1 is patentable over Rahman et al. in view of Novak, Cook et al. and Carmona et al. and further in view of Paschke et al.

Since claims 11 and 12 depend, directly or indirectly, from claim 1, they each incorporate all the limitations of claim 1 in addition to other limitations, which together further patentably distinguish them over the cited references. Therefore, Applicant requests that the rejection of claims 11 and 12 be withdrawn and that these claims be allowed.

Reconsideration is respectfully requested.

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VII. Concluding Remarks

In view of the foregoing amendments and remarks, Applicant earnestly solicits an early issuance of a Notice Allowance with claims 1-28. If there are any remaining issues that can be addressed over the telephone, the Examiner is cordially invited to call Applicant's attorney at the number listed below.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By 
Jun-Young E. Jeon
Reg. No. 43,693
626/795-9900

JEJ/sls

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